International Journal of Business Management & Research (IJBMR)
ISSN(P): 2249-6920; ISSN(E): 2249-8036
Vol. 3, Issue 5, Dec 2013, 109-116

CREDIT SCORING IN GHANA: STATE OF UTILIZATION, CHALLENGES, BENEFITS AND PROSPECTS

JOSEPH OSEI ASANTEY

Banker, Standard Chartered (Ghana) Bank, Ghana

ABSTRACT

Financing businesses is a major challenging task for financial institutions in developing countries. Business enterprises continue to make significant impacts on the economies of many countries. The purpose of the study was to examine methods of credit scoring and risk assessment in the banking sector of Ghana. Interviews were used in a survey to solicit information from bankers randomly selected from the 27 banks in Ghana. Findings of the study indicate that credit scoring and in-house built risk grading system are the most prevalent types of SME risk assessment. Similarly, findings reveal credit scoring as the most prevalent technique used in SMEs risk rating. The importance of risk rating was examined in the study, and most respondents agreed that risk rating serves as an aid in conjunction with other lending considerations. Findings further identified the fact that banks are interested in deploying credit scoring as a lending tool in future. It is recommended that banks employ training methods to equip employees to become expert credit risk assessors. The sector of banking in Ghana must also collaborate with the government to establish a credit bureau to which reference can be made in risk assessment.

KEYWORDS: Credit Scoring, Utilization, Benefits, Challenges, Prospects

INTRODUCTION

There are several different lending technologies available to lending institutions to assess the creditworthiness of their borrowers. These different lending technologies can generally be grouped into two types, namely transaction lending and relationship lending (Gambacorta & Marques-Ibanez, 2011). The main difference between the two is that the former technologies are primarily based on ‘hard’ quantitative data or data that can be easily quantified such as financial statements, bank account details and credit scores, whilst relationship lending is based on ‘soft’ qualitative data or data that can be observed through time but not easily quantified.

The different types of transaction technologies include financial statement lending, credit scoring, asset-based lending, factoring and trade credit (Antoine, McAndrews & Skeie, 2013). These various types of lending technologies can be distinguished by the type and source of hard information that is the main basis for the underwriting decision.

Briefly, financial statement lending involves underwriting loans based on the strength of the borrower’s financial statements (Antoine et al., 2013). Credit scoring is based on hard information about the firm and its owner, which is usually derived externally, often from credit bureaus (Antoine et al., 2013; Gambacorta & Marques-Ibanez, 2011).

Asset based lending is an extension of credit based primarily on the value of the assets pledged as collateral rather than the underlying creditworthiness of the borrower. Factoring is a narrow form of asset based lending where the lender purchases the borrower’s accounts receivables. Trade credit lending involves financing of an underlying trade transaction between the borrower and its suppliers or customers.

OBJECTIVE OF THE STUDY

The objective of the Study was to undertake the following:

- Examine the current level of usage of Credit Scoring in Ghana
- Examine the benefits and importance of Credit Scoring to Banks in Ghana
- Examine the problems being encountered with the usage of Credit Scoring in Ghana
- Examine how effective has Credit Scoring been in SME Lending within Ghana
- Examine the main concerns of impediments to the deployment of Credit Scoring by Banks that are not using the Credit Scoring Technology.

LITERATURE REVIEW

Before we even delve into the current details of the Ghanaian SME market and use of scoring here, it would be extremely beneficial for us to review and discuss the basics of credit scoring and the fundamental concepts that underline the key prerequisites for credit scoring to work.

Credit scoring is the set of decision models and their underlying techniques that aid lenders in granting credit by assessing the risk or creditworthiness of borrowers Berger & Udell, 2004; Gambacorta & Marques-Ibanez, 2011). Small business credit scoring is based on hard information about the SME and its owner. The information on the owner is primarily personal consumer data obtained usually from consumer credit bureaus and/or other data gathered from bank records. The data are entered into a loan performance prediction model to yield a score for the loan. Based on the score, the bank makes a decision (in some cases, this process is automated) to approve or reject the loan (Neu, 1998; Tawiah, Ennin, Fosu & Ghansah, 2013).

Credit scorecards are also “tools used to predict the behavior of new applicants based on the performance of previous applicants” (European Central Bank, 2013). Scorecards can as well be used to predict the performance of existing accounts, based on past experience of accounts with similar characteristics, records and performances.

Credit scorecards are indeed useful for standardizing, simplifying, and speeding up credit decision-making. Speedy decision making is of real essence in this competitive market such as ours, where businesses are in dire need of finance to grow. Under Credit Scoring models, statistical scorecards are built with data from actual loans and applications, and they have the important added benefit of quantifying the probability of default (Gambacorta & Marques-Ibanez, 2011).

Among the statistical models generally utilized, there are two basic types: generic (built with data from a variety of lenders and performance reported to a centralized repository such as a credit bureau), and custom (built with the performance data from a specific financial institution) (Antoine et al., 2013). A custom scorecard may use a generic score as one of its inputs. This is however optional.

The Use of Credit Scoring for Small Businesses

Credit scoring for consumer loans started in the 1950s but extended to small businesses only in the mid 1990s in the U.S (Kashyap & Stein, 1994). The main type of information used in small business scorecards is the personal credit history of the owners. As such, credit scoring may be applied to informationally opaque SME given that much of the score is determined by the personal history of the owner not the SME. However, in countries where consumer credit bureaus are not available or where information is insufficient, inclusion of other hard information such as the firm’s business and

financial statements have been featured in many risk scorecards developed by financial insitutions.

The Gains from the Use of a Credit Scoring Lending Model

A number of benefits accrue from credit decisions and risk management actions that use an effectively and properly developed, implemented, and managed scoring system. Let us discuss these benefits (Antoine et al., 2013; Kashyap & Stein, 1994):

- Measurement of risk across board is objective, standardized, consistent, and transparent which ultimately results in all customers of similar risk receiving the same credit decision. This prevents favoritism and tainted credit decision making.
- Due to the improved automation/ systemization in decision making for credit applications, credit approvers are freed up and are able to concentrate on more complex deals and requests. Such a scenario improves underwriting effectiveness and saves cost.
- With Credit Scoring, it makes it easier to quantify the potential risk inherent in the lending process. It creates the room to price appropriately based on the quantifiable risk at stake. Such a risk based pricing strategy can further lead to a lower cost of borrowing for the lowest risk customer. Portfolio health risk is therefore effectively and profitably managed.

Process and Methodologies for Building Scorecards

Credit scoring systems are based on the past performance of borrowers who are similar to those who will be assessed under the system. The aim of a credit scoring system is to predict risk. This is usually done by taking a sample of past borrowers with their application details and subsequent performance history and trying to identify the connections or common predictors that differentiates a 'good' from a 'bad' borrower (European Central Bank, 2013). This process leads to a scorecard where the main differentiating characteristics or predictors are given scores, which will aggregate into a total score to indicate the risk of a borrower going bad.

There are two main types of scorecards, application scorecards, developed using only data available at the time of loan application and behavioral scorecards which utilize information gathered from after the borrower becomes a customer of the bank (Kashyap & Stein, 1994). In developing a credit scorecard, the underlying techniques used to identify the common predictors of an outcome range from non-statistical methods such as expert judgment, linear programming, and neural networks to statistical methods such as discriminant analysis, logistic regression and classification trees (Antoine et al., 2013).

When a scorecard is built, it is by necessity built on historical data. But once developed, the scorecard will be applied to new borrowers (application scorecard) and/or on existing borrowers (behavioral scorecard) whose risk may have changed over time (Antoine et al., 2013). Validation of the scorecard (at time of development and monitoring on an on-going basis after deployment) is important to ascertain how representative the sample used in the scorecard is to the current profile of borrowers. This can be performed with various tests, which compare the prediction of the scorecard with actual outcome. Once the validation is complete, the cut-off scores to trigger the various loan decisions will have to be made.

The credit scorecard can be implemented at loan application time and/or as a monitoring tool during the life of the loan (Mensah, 2004). New borrower is scored at application and is accepted or rejected based on the credit score and/or

other considerations in conjunction with the credit score. Subsequently re-scoring can be conducted at regular intervals to monitor the borrower's risk profile.

The Ghana Credit Scoring Scenario

Lending is a major source of income generation by most Banks in Ghana. Banks allocate sizeable portions of their assets into varied types of credit. Lending is done primarily with the intent of generating enough income to contain expenditure and enhance shareholder value. Current competition within the Banking Industry is compelling Banks to either be cautious with their lending activities or to be flexible with their lending criteria so as not to lose their client base (Quainoo, 2011). In competitive periods in Banking, Banks to a large extent are less cautious and more fluid in advancing credit (Mensah, 2004). This in turn if not checked appropriately leads to a rise in nonperforming loans.

Whilst various Banks employ the use of different lending methodologies- Relationship based lending, Asset Backed Lending, Financial Statement lending methodology etc, Credit Scoring has been identified to be a critical tool in credit decision and delivery with its corresponding advantages that far outweigh the other existing methods of credit decisioning (Tawiah et al., 2013).. The research conducted sought to establish the levels of usage of Credit Scoring in credit decision, its impact on credit delivery within Banks in Ghana and the challenges associated with the use of this lending tool.

MATERIALS AND METHODS

Out of the 27 Banks in Ghana, access to all of these Banks was obtained. The questionnaire developed for this exercise contained two parts. The first part deals with Banks that are currently using Credit Scoring Tool, whilst the second part deals with Banks not using Credit Scoring tool. The one-on-one interview method was used and in all circumstances, the SME/ Credit Risk Managers/ Senior Managers of these Banks provided the requisite responses to our questions. Responses from each of these Banks have been tabulated and further analyzed under the results and discussion section.

RESULTS AND DISCUSSIONS

Table 1: Existing Practice of Risk Grading/Scoring of SME's by Banks

Types of Risk Grading/Assessment/Scoring	Frequency	Percentage
Credit scoring	8	34.78
In House Built Risk Grading System	8	34.78
Relationship Based Assessment	6	26.09
Others	1	4.35
Total	**23**	**100**

Table 1 indicates the type of SMEs risk grading, assessment or scoring used by banks. From the table, 8 (35%) respondents indicated credit scoring. The same proportion of respondents revealed in-house built risk grading system. Also, 6 (26%) respondents indicated relationship-based assessment, whiles about 4% of respondents indicated some other types of scoring or grading. Thus a majority of respondents indicated that credit scoring and in-house built risk grading system are types of SME risk assessment.

Table 2: Usage of Risk Grading/Scoring of SME's by Banks

Does Your Bank Use a Risk Grading/Credit Scoring Model in SME Loans?	Frequency	Percentage
YES	11	64.71
NO	6	35.29
Total	**17**	**100**

Table 2 shows if banks use SMEs risk grading or scoring. In this regard, 11 respondents agreed, whilst 6 of them disagreed. These frequencies represent about 65% and 35% of all respondents respectively. Hence, most respondents agreed that banks use SME risk grading or scoring in Ghana.

Table 3: Rating Technique Deployed by Banks on SME Loans

Types of Techniques Used by Banks in Risk Rating SME Loans	Frequency	Percentage
Credit Scoring	6	35.29
Subjective Assessment	5	29.41
Hybrid (Quantitative + Subjective)	4	23.53
Others	2	11.76
Total	**17**	**100**

Table 3 indicates techniques used by banks in risk rating for SMEs loans. The table indicates credit scoring (35%), subjective assessment (29%), hybrid method (25%) and other methods (12%). Therefore, a majority of respondents indicated that credit scoring is a technique used in SMEs risk rating.

Table 4: Role and Importance of Risk Rating Systems to Banks

Importance of a Risk Rating System to Your Bank in SME Lending Decisions	Frequency	Percentage
Main Determinant to loan Approval	4	25.00
As an aid in Conjunction with other considerations	11	68.75
Others	1	6.25
Total	**16**	**100**

Table 4 depicts the importance of risk rating to banks. The first importance of risk rating is about it being a determinant of loan approval for SMEs (25%). Also, about 69% of respondents indicated that it aids in conjunction with other lending considerations. One (1) respondent was of the view that there were other advantages of risk rating to banks. Hence, most respondents of the study agreed that risk rating serves as an aid in conjunction with other lending considerations.

Table 5: Effectiveness of Rating System/Credit Scoring in SME Lending

How Effective Has the Rating System/Credit Scoring Been to the Bank so Far	Frequency	Percentage
Reduced Default risk	11	57.89
ReducedLoanProcessing Time	6	31.58
Increases Profitability	1	5.26
Others	1	5.26
Total	**19**	**100**

Table 5 shows measures of the effectiveness of rating systems in SMEs lending. The first measure of the effectiveness of rating systems is “reduced default risk” (58%). Also, about 32% of respondents mentioned “reduced loan processing time”, whiles 5% of respondents mentioned “increased profitability” and other measures of effectiveness. It can therefore be mentioned that most respondents revealed “reduced default risk”. Thus, with rating systems, the risk of SMEs defaulting is reduced.

Table 6: Interest in Deploying Credit Scoring as a Lending Tool in the Future

Is the Bank Interested in Using Credit Scoring As A Credit Risk Assessment Tool	Frequency	Percentage
YES	4	80
NO	1	20
Total	**5**	**100**

Table 6 tells if banks have interest in deploying credit scoring as a lending tool in the future. In this regard, 4 out of 5 respondents agreed. One (1) respondent disagreed. Therefore, a majority of respondents agreed that banks are interested in deploying credit scoring as a lending tool in future.

Table 7: Main Concerns of Impediments to Credit Scoring Deployment

Main Concerns of Impediment to the Use of Credit Scoring in Lending Decisions	Frequency	Percentage
Availability of Information	1	20.00
Lack of Credit Bureau/Central Database	1	20.00
Insufficient Infrastructure	1	20.00
Lack of In House Expertise	1	20.00
Cost Concerns	1	20.00
Total	**5**	**100**

Table 7 shows the main concerns of impediments to credit scoring development. A respondent each mentioned "availability of information", "lack of credit bureau", "insufficient infrastructure", "lack of in-house expertise" and "cost concerns".

CONCLUSIONS

The major conclusions derived from the research exercise include the following:

- It was established that 64% of Banks interviewed are either using the Credit Scoring method of credit decisioning or have an in house built risk grading system for use.
- The research exercise found out that 29 % of Banks examined use their subjective assessments in Credit Decisioning.
- This exercise also deduced that 68% of Banks use a Credit Scoring model as an aid in conjunction with other considerations in making credit decisions.
- An interesting fact that surfaced during this exercise was about the fact that 25% of Banks interviewed confirmed that the risk rating model is a main determinant to loan approval/ credit decisioning.
- Indeed 57% of Banks interviewed also confirmed that their risk rating/ scoring system of credit decisioning helps in reducing the defaults associated with Lending.
- This research exercise also established that 80% of Banks not using a risk rating model have in recent times, generated interest in deploying such a lending tool.
- Finally the main concerns of impediments to Credit Scoring development are availability of Information, lack of credit bureau, insufficient infrastructure, lack of in-house expertise cost concerns

DISCUSSIONS AND RECOMMENDATIONS

Findings of the study indicate that credit scoring and in-house built risk grading system are the most prevalent types of SME risk assessment. Agreeably, De la Torre et al., (2010) posited that most banks take interest in using credit scoring and in-house built risk grading system as types of SME lending risk assessment. Similarly, findings reveal credit scoring as the most prevalent technique used in SMEs risk rating. This finding is supported by findings of the research of Kumbirai & Webb (2010). The importance of risk rating was examined in the study, and most respondents agreed that risk rating serves as an aid in conjunction with other lending considerations. This is theoretically backed by Kashyap & Stein

(1994). Findings further identified the fact that banks are interested in deploying credit scoring as a lending tool in future. Findings additionally identified concerns of impediments to credit scoring development, and these include “availability of information”, “lack of credit bureau”, “insufficient infrastructure”, “lack of in-house expertise” and “cost concerns”.

It is recommended that banks employ training methods to equip employees to become expert credit risk assessors. The sector of banking in Ghana must also collaborate with the government to establish a credit bureau to which reference can be made in risk assessment.

REFERENCES

1. Adade, T. C., Ahiawodzi, A. K., (2012). Access to credit and growth of small and medium scale enterprises in the Ho municipality of Ghana, *British Journal of Economics, Finance and Management Sciences*, **6** (2): 34-51.
2. Addotei, C. A. (2012). The Challenge of Financing Small and Medium-scale Enterprises (SMEs) in the Ashanti Region, Masters Dissertation, Institute of Distance Learning, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, pp. 22-55.
3. Antoine, M., McAndrews, J., Skeie, D., (2013). Bank Lending in Times of Large Bank Reserves, Bank of New York, Staff Report, No. 497, pp. 3-19.
4. De la Torre, A., Peria, M. S. N., Schmukler, S. L. (2008). Bank involvement with SMEs: Beyond relationship lending, Policy Research Working Paper, 4649, pp. 10-67.
5. European Central Bank (2013). *Collateral Eligibility Requirements: A Comparative Study Across Specific Frameworks*, pp. 45-67.
6. Gambacorta, L., Marques-Ibanez, D., (2011). The bank lending channel: Lessons from the crisis, BIS Working Papers, 345, pp. 4-26.
7. Kapstein, E. B., Kim, R. (2010). The social and economic impact of Standard Chartered Ghana, pp. 32-43.
8. Kashyap, A. K., Stein, J. C. (1994). *Monetary Policy and Bank Lending*, The University of Chicago Press, Chicago, USA, pp. 221-261.
9. Kumbirai, M., Webb, R. (2010). A financial ratio analysis of commercial bank performance in South Africa, *African Review of Economics and Finance*, **2** (1): 30-53.
10. Kutsienyo, L. (2011). The Determiners of Profitability of Banks in Ghana, Masters Dissertation, Institute of Distance Learning, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, pp. 56-71.
11. Mensah, S., (2004). *A Review of SME Financing Schemes in Ghana*, UNIDO Regional Workshop of Financing Small and Medium-scale Enterprises, pp. 3-20.
12. Neu, C. R. (1998). *International Trade in Banking Services*, University of Chicago Press, Chicago, USA, pp. 247-284.
13. Quainoo, T. K. (2011). The Impact of Loans on SMEs in Ghana, Masters Dissertation, Institute of Distance Learning, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, pp. 64-73.
14. Quaye, D. N. (2011). The Impact Of Microfinance Institutions On The Growth Of Small And Medium-Scale Enterprises (SMEs), Masters Dissertation, Institute of Distance Learning, Kwame Nkrumah University of Science

and Technology, Kumasis, Ghana, pp. 44-56.

15. Tawiah, S., Ennin, S., Fosu, K., Ghansah, L. (2013). The Impact of Microfinance on Small and Medium Size Enterprises in Ghana, Bachelor's Dissertation, Christian Service University College, Kumasis, Ghana, pp. 34-54.